

[illegible]

Carbon nanotubes are formed on a substrate by providing a coiled filament in a chemical vapor deposition chamber, supporting a substrate having a catalytic coating provided thereon inside the coiled filament, evacuating air, if present, from the chamber, heating the filament and applying a bias voltage between the filament and the substrate, introducing a reactant gas into the chamber, and pyrolyzing the reactant gas to deposit the carbon nanotubes on the catalytic coating. The substrate can be in the form of a rod or fiber and the carbon nanotubes can be deposited in a radially extending cluster on the substrate. The present invention also contemplates an apparatus for carrying out the inventive method.